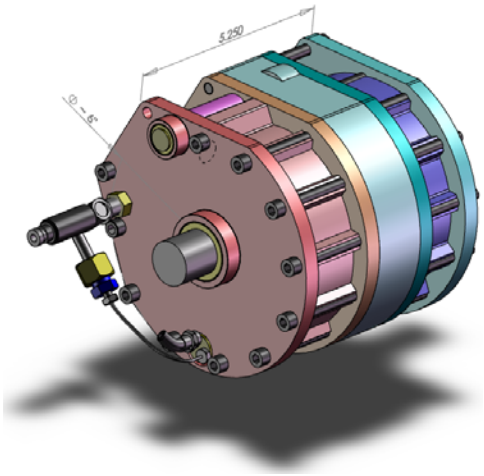
LiquidPiston, Inc.

Introducing the
High Efficiency Hybrid Cycle Engine



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LiquidPiston Vision

Internal Combustion Engines (ICEs), based on new highly-efficient, multi-fuel engine architectures, will be critical for the world's "Expensive Oil" economy for the foreseeable future, by enabling:

- Very efficient utilization (compared to current ICEs) of fossil fuels & bio-fuels, and a
- Practical evolution to alternative and lower-carbon energy sources

for transportation and power generation applications.

Why A New ICE?
Entering the Era of "Green Mobility"

Climate Change

Unfriendly or Unstable Oil Supply Countries

End of Era of Cheap Oil – Supply & Political Constraints

US Diesel & Gas Consumption = 180 B Gal (2006)

Current ICE Platforms Originate from 1860's

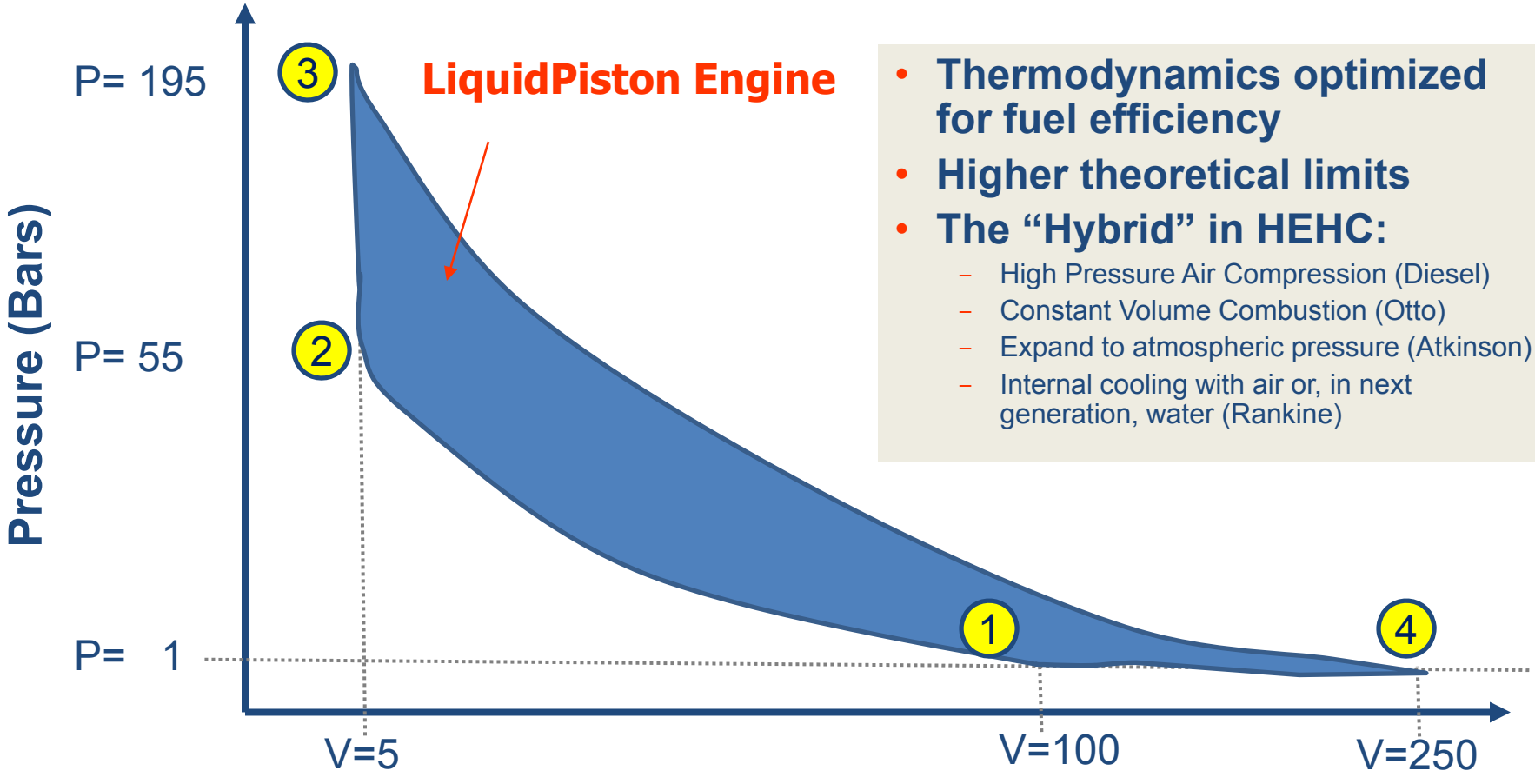
Legacy ICE Ave. Efficiency < 20%

$275B Annual Mkt 60 M units, 5% G/R

Federal CAFE Stds

LPI's Innovation: *High Efficiency Hybrid Cycle*

Move Combustion cycle from Time Domain to Spatial Domain

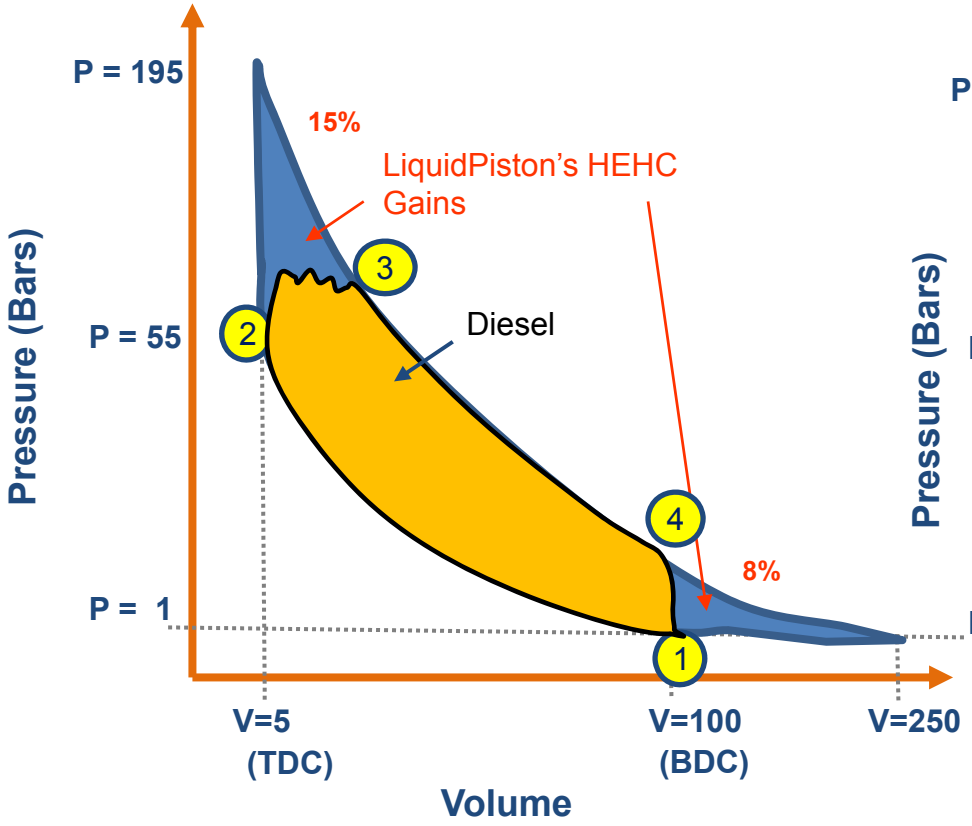


- **Thermodynamics optimized for fuel efficiency**
- **Higher theoretical limits**
- **The "Hybrid" in HEHC:**
  - High Pressure Air Compression (Diesel)
  - Constant Volume Combustion (Otto)
  - Expand to atmospheric pressure (Atkinson)
  - Internal cooling with air or, in next generation, water (Rankine)

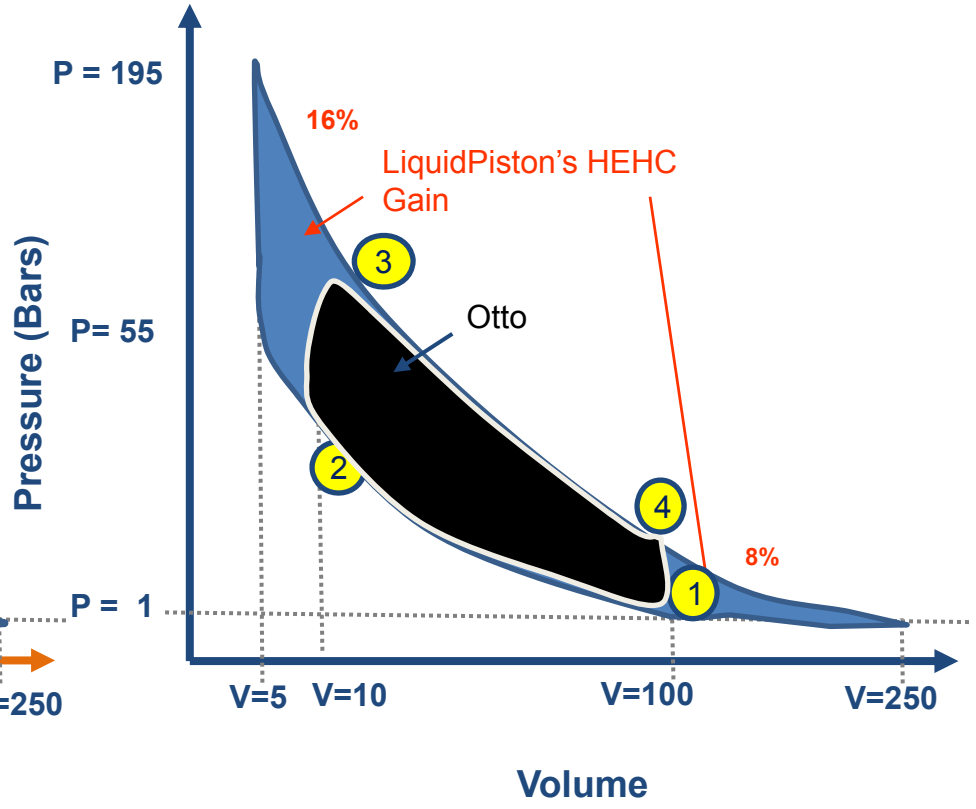
Efficiency ≈ Area under the curve

HEHC Thermodynamic Advantages

vs. Diesel Cycle

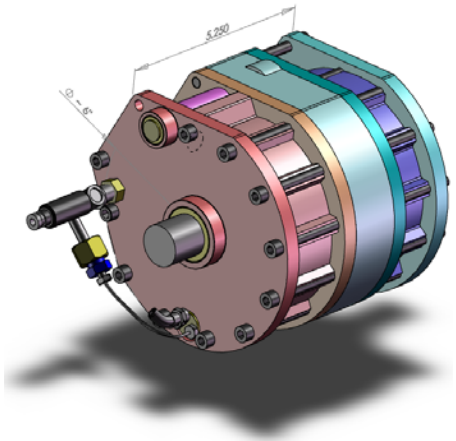


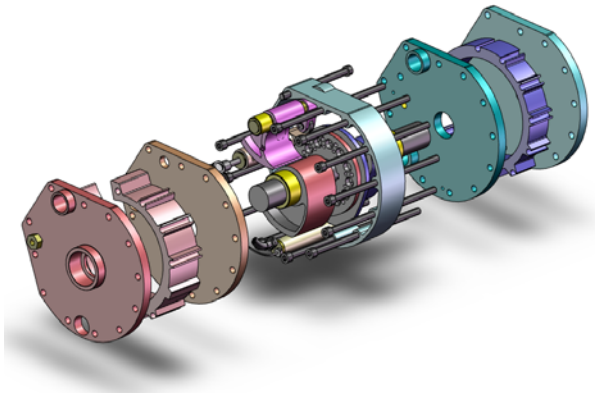
vs. Otto Cycle



Efficiency ≈ Area within the curve

Initial Prototype Engine (10 HP)





LPI BENEFIT	*Improvement Factor*	*Parameter*
Efficiency Max	**x 1.4**	$\eta_{max, conventional}$ ~42% **$\eta_{max, LPI}$ ~ 57%**
Efficiency Ave. for variable load/ automotive application = Fuel Consumption	**x 3**	$\eta_{avg, conventional}$ ~ 17% **$\eta_{avg, LPI}$ > 50%**
Size/weight (<50 kW)	**x 5-10**	5 Lbs / HP (Otto) 10 Lbs / HP (Diesel) **1 Lbs / HP (LPI)**
Size/weight (>50 kW)	**x 3- 6**	3 Lbs / HP (Otto) 6 Lbs / HP (Diesel) **1 Lbs / HP (LPI)**
Noise Level	**Lower (eliminate poppet valve & exhaust noise)**	**tbd**

LPI Strategy

Provide high efficiency engine technology and design expertise via partners who will incorporate the HEHC engine in multiple automotive and non-automotive applications.

LPI will:

- Build a small world-class R&D team to continue innovation in core combustion engine technology and engine systems design
- Focus on OEMs and licensees as the primary go-to-market strategy
  1. Auxiliary Power Unit and Genset mfrs – initial target
  2. Serial Hybrid EV range extender engine – strategic target
- Utilize 3rd party manufacturers, with LPI manufacturing engineering
- Build asset value and intellectual property protection through continuing development of a comprehensive patent portfolio (1 patent granted, 4 pending, more in the pipeline.)

Multiple Potential Applications

Automotive
- Range Extender ICEs
- Primary Propulsion

GM Volt

Tata $2500 Car (Nano)

Electric Generators

Truck APUs

Military/Civilian Gensets

Non-Auto Vehicles

Vectrix Electric Scooter

Honda Riding Mower

Military

Unmanned Aerial Vehicles

Exo-Skeleton Armor

Residential Co-Gen

Climate Energy FreeWatt

= Initial Target Market

Company-Building Challenges

- Experienced staff w. engine experience
  - Not in CT
- Supporting infrastructure – machine shops, outsourced mfrs, test houses, etc.
- Go-to-Market:
  - Long OEM design-in cycle
  - Engines = scale business
  - Startup suppliers perceived as risky
- Maintain capital efficiency
  - Goal: < $25M all in

Establish 2nd site in auto tech location

- Seek MI, Ohio, or Ontario gov't & local financing & assistance

- Pursue OEM strategy
- Gensets/APUs as initial commercial mkt
- Selective DoD applications
- Seek partner financing

Financials

- **Sources of revenue**
  - Engine product sales
  - Manufacturing licenses/royalties
  - NRE engineering design services for partners
- **Revenue Forecast**
  - Initial pilots and OEM contracts in 2009

Team

- **Technology Development**
  - Nikolay Shkolnik,
    - PhD in Physics, Uconn
    - 20 patents
    - Founder of Quest Systems Inc, DARPA funded
    - Clean Energy Program Manager, GEN3 until 2007
  - Alexander Shkolnik
    - PhD, MIT, expected May 2009 (Dynamics, Control)
- **Business Development**
  - Per Suneby
    - 25 years of experience with startup companies, a VC firm (Flagship Ventures), and F500 technology companies
- **Investors / Directors**
  - Bill Frezza, Adams Capital Management
  - Andy Harrison, NorthWater Capital
- **Advisory Board of Industry Experts**

Summary

- **Huge markets (transportation & power generation), in turmoil – ripe for disruption**
  - Autos and other vehicles must be re-invented
  - Energy efficiency and multi-fuel capability essential
- **LPI is pursuing an engine systems approach:**
  - Based fundamental thermodynamics – vetted by industry experts
  - Strong IP position; opportunity to continue to innovate
  - OEM go-to-market strategy: Discussions underway with multiple players
- **LPI will enter the market in 2009:**
  - Engine prototype – 1Q; initial pilot design-in wins & revenue
  - Sign 1-2 initial major partnerships (Joint dev., NRE/equity investment, lab trial)
  - Close Series B to ramp operations